of SAXS/WAXS and fibre diffraction data collection on stations 8.2 (Nick Terrill and Anthony Gleeson) and 7.2 (Rob Kehoe) respectively. On the 24th November, there was a full day's training in the use of CCP13 and NCD software with demonstrators Mark Shotton, Richard Denny, Nick Terrill and Anthony Gleeson. This covered the reduction of one-dimensional NCD data using XOTOKO and its analysis using the XFIT and CORFUNC programs. Data format conversion and the preliminary analysis of two-dimensional fibre diffraction data using XCONV and XFIX were demonstrated along with the use of the 2-D pattern-fitting program, LSQINT. A total of 17 PhD students and post-doctoral researchers attended the workshop, which was received very positively. It is now planned to stage the software training workshop as an annual event and some delegates also voiced their interest in an advanced software training course. Notification of further workshops will be published via the CCP13 bulletin board (to subscribe to the bulletin board, see http://www.dl.ac.uk/SRS/CCP13/subscribe.html). All CCP13 software can be downloaded from http://www.dl.ac.uk/SRS/CCP13

Mark Shotton
Daresbury Laboratory

Denver X-ray Conference, August 1999, Steamboat Springs

If you ever get an invite to the Denver X-ray Conference at Steamboat Springs, drop everything and take off for a week, it's a brilliant place for a conference. You would be advised to make your travel plans well in advance as this is about as American as public transport gets. I arrived fresh from a ten hour flight via Dallas (thanks to American for upgrading me to business class) to be greeted by howls of derision when I enquired about getting to Steamboat Springs via public transport. The conference title is a little misleading, it is an annual event, normally held in Denver but every three years or so it migrates to Steamboat Springs for a larger event and all the family members join in. I use migrates wisely as Steamboat Springs is 170 miles (280km) from Denver and after 5pm there is no public transport in summer unless you book in advance. Well you live and learn, so a hire car it was. The drive to Steamboat is fairly simple, onto the interstate, turn right at interstate 70, drive for a few hours, turn right onto 9, drive a few more hours and Bob's your uncle, you're at the hotel, no problem, except for the suicidal deer of course, but that goes without saying, oh and it was dark by this point, but hey who's counting.

Steamboat Springs spends most of the winter wrapped in a blanket of snow and is known for its skiing and winter sports. It is placed in a very picturesque setting on the side of the Rockies at about 9000ft (2750m). It's not far from Walton Creek; I was expecting John Boy to drive round the corner every time I went for a walk. The hotel (The Sheraton, reasonable rates over summer) sits at the bottom of the major cable car route. The cable car is a pleasant 10 minute journey to the top of the mountain where the first day started with a Plenary session chaired by Randy Barton of DuPont and Vic Buhrke of The Buhrke Company. The conference is very broad in nature covering both diffraction and spectroscopy. Due to the large number of industrial members, powder diffraction has a large slice of the cake, with single crystal, SAXS and spectroscopy making up the remainder. However, the plenary sessions, being open to all, were of an exotic flavour covering uses of X-rays in space, from the growing of protein single crystals and their examination with the Bede system (www.bede.com; www.nasa.gov) to X-ray detectors in space. Thus the start gathers many of the participants up to the top of the mountain for the opening. The plenary session lasts until lunch with the remainder of the day back in the hotel. To descend the mountain you can either take the serene cable car or, as many of the members decided, take up the $10 challenge. Just outside the hall, a mountain bike rental was doing brisk business, hiring out bikes for one-way to the bottom, this is the kind of sport I can just about manage, let gravity do all the work for you and hope friction doesn't let you down. You get 1 hour for the journey down, it can be done in about 25 minutes if you are suicidal. The journey is along a sheep track with innumerable concealed hairpin bends, foot deep ruts and shear drops, but well worth it and I highly recommend it. On reaching base camp, there is time for a quick shower and a spot of lunch on the terrace outside Starbucks before the rest of the day's talks.

I was kindly invited by Randy and Ben Hsiao to talk in the *Polymers II: In Situ Scattering/Diffraction Characterization of Polymers* session about the work we have been doing at Daresbury on 16.1 with the extruder and to talk a little about the available software in the CCP13 suite. Due to the high number of powder diffraction users I thought it prudent if I also mentioned the CCP14 powder diffraction suite as well. The session I was involved with covered mainly extrusion and simultaneous studies of polymer crystallisation. We heard from Dr Mahendrasingam from Keele on their DL synchrotron studies as well as many U.S. and international contributors in the field. The full program can be found at http://www.dxcicdd.com /99/default.htm The discussion focused heavily on the use of synchrotron radiation to study polymer phase transitions before and during crystallisation with work presented by Prof. J.M. Schultz, University of Delaware, Prof. B.S. Hsiao and myself to name a few.

Later that evening I looked up an old friend from my undergraduate days. He used to live in Birmingham, but moved to Denver about 4 years ago. He works for Bede and has always held a fascination for quantum mechanics; he is currently doing a great impression of the first spherical harmonic (physics joke) due to the rich food. We spent the evening of the conference dinner reminiscing about old times as the sun set over the mountains and we were bathed in the warm orange glow. It's hard work this. I will definitely be going back.

Patrick Fairclough
University of Sheffield

8th Annual CCP13 Workshop, 15th –17th June 1999, St Andrews

This year saw a change in venue for the workshop which moved away from Daresbury to St Andrews in celebration of the Principal, Struther Arnott's 65th birthday and in honour of his contribution to fibre diffraction. John Squire who was retiring as chairman of CCP13, welcomed Trevor Forsyth as the new chairman and invited Prof. Arnott to begin the presentations with a plenary lecture entitled "Lessons for today and tomorrow from yesterday".

In this entertaining and informative talk, Prof. Arnott took us from a lesson in Scottish English to the more serious theme of the confidence in structures derived from fibre diffraction data. For example, collagen solved by crystallography shows no significant differences from the fibre work done fifteen years previously and oligonucleotide structures confirm the earlier results of fibre diffraction. The rest of the afternoon included talks on microfocus fibre diffraction experiments from Manfred Burghammer (ESRF) and a discussion of the opportunities for fibre diffraction on the new station 14.1 at the SRS, given by Liz Duke (Daresbury). The final talk of the day was given by Prof. Ian Ward (Leeds), who spoke about his work on elucidating the processes of fibre drawing and spinning, using data from both infra-red spectroscopy and X-ray diffraction. The day concluded with part one of the joint CCP13/NCD business meeting in which John Squire, in his role as editor of the CCP13 newsletter, *Fibre Diffraction Review*, outlined the intention to scrutinize contributed articles more rigorously, using two referees per article. Greg Diakun updated the audience on developments in the NCD facility group and the requirements for microfocus experiments at Daresbury were discussed.

Richard Heenan (RAL) stepped into the breach to replace Gerald Stubbs (Vanderbilt) who had unfortunately been unable to leave the US due to the storms raging across the country. Richard described his procedures for modelling scattering from surfactant interfaces. Tim Wess (Stirling) described his work on uncovering the mechanism whereby elasticity in fibrillin occurs and was followed by Joseph Orgel (Stirling) who discussed the phasing of the meridional reflections from collagen. After coffee, Watson Fuller (Keele) described, in a complementary talk to Prof. Ward's, the small-angle scattering data collection techniques that the Keele group had developed to follow the processes of drawing and crystallisation in polymers. Anatoly Snigirev (ESRF) reported on developments in microfocus technology, particularly Fresnel optics and refractive optics, and their applications. Andy Hammersley (ESRF) discussed various user interface types employed in programs and their suitability in various applications. He then described the new "Files Series" interface in Fit2D , suitable for processing multiple data files.